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DIV. OF OIL, GAS & MINING

Transmittal

Date: Wednesday, April 20, 2016

Project: Simplot Phosphates, LLC – Vernal Phosphate Mine, Greater sage-grouse support

To: April A. Abate, Environmental Scientist III
Utah Division of Oil, Gas, and Mining
1594 W. North Temple, Suite 1210
Salt Lake City, UT 84116

From: Michael R. Murray, PhD

Subject: Draft Addendum to Work Plan for Greater Sage-grouse Baseline Habitat Assessment

We are sending you:

- ☒ Attached
- ☐ Under separate cover via the following items:
- ☐ Shop drawings
- ☐ Prints
- ☐ Plans
- ☐ Samples
- ☐ Specifications
- ☐ Copy of letter
- ☐ Change Order
- ☐ Other:

Copies	Date	No.	Description
1	March 2016	----	One hard copy of the *Draft Addendum to Work Plan for Greater Sage-grouse Baseline Habitat Assessment – 2016 Activities* and original transmission letter addressed to Paul Baker, dated March 21, 2016

These are transmitted as checked below:

- ☐ For your approval
- ☒ For your use
- ☐ As requested
- ☐ For review/comment
- ☐ For bids due
- ☐ Approved as submitted
- ☐ Approved as noted
- ☐ Returned for corrections
- ☐ Other:
- ☐ Resubmit
- ☐ Submit
- ☐ Return
- ☐ Prints returned after loan to us

Remarks:

Copy to:

Signed:

Michael R. Murray

hdrinc.com
River Quarry at Parkcenter, 412 E. Parkcenter Blvd. Suite 100, Boise, ID 83706-6659
(208) 387-7000

March 21, 2016

Paul B. Baker
Minerals Program Manager
Department of Natural Resources
Division of Oil, Gas, and Mining
1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, UT 84114-5801

Subject: **Draft Addendum to Work Plan for Greater Sage-grouse Baseline Habitat Assessment – 2016 Activities**

Dear Paul:

As you are aware, Simplot is coordinating with the Division of Oil, Gas, and Mining (DOGM) on the continued implementation of the *Conservation Plan for Greater Sage-grouse in Utah* for private lands including possibly developing a mitigation and conservation plan for future mine expansion. As a first step toward developing such a plan, Simplot submitted a work plan in 2015 that described an approach toward establishing habitat baseline conditions at the Vernal Mine and Barton Ranch properties. The 2015 field activities, carried out in accordance with the work plan, are summarized in the document *2015 Greater Sage-grouse Habitat Assessment Repor*t, which was submitted to DOGM on March 3, 2016.

As a follow up, we are submitting to you an addendum to the work plan that presents proposed 2016 field activities. We request that you coordinate review of the addendum with your staff and other state agencies. We plan to initiate 2016 field work in late April 2016.

If you have questions please contact John Spencer at (435) 781-3348 (John.Spencer@simplot.com) or myself at (208) 387-7033 (mike.murray@hdrinc.com).

Thank you for your cooperation.

Very truly yours,

HDR Engineering, Inc.

Michael R. Murray, Ph.D.
Project Manager

CC: John Spencer, Simplot (w/o attachments)

Draft Addendum to Work Plan for Greater Sage-grouse Baseline Habitat Assessment – 2016 Activities

Vernal Phosphate Mine, Greater Sage-grouse Support

Simplot Phosphates LLC

Vernal, Utah

March 21, 2016

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Introduction

In July 2015, HDR Engineering (HDR), on behalf of Simplot Phosphates LLC (Simplot), submitted the document *Draft Work Plan for Greater Sage-Grouse Baseline Habitat Assessment* (work plan) to Utah Division of Oil, Gas and Mining (DOGM). DOGM, the lead coordinating state agency for sage-grouse mitigation at permitted Utah mine sites, in turn requested review and comments from Utah Division of Wildlife Resources (UDWR). DOGM and UDWR provided comments to Simplot in August 2015. Simplot revised the work plan and initiated field activities in late August 2015. HDR conducted preliminary vegetation surveys for the late brood rearing seasonal habitat at Simplot's east mine and Barton Ranch properties (the survey work was near the end of the late brood rearing season; additional surveys will be repeated in early summer in 2016). HDR also sampled sage-grouse winter range habitat within the east mine property in 2015 (see maps in work plan for site locations). A summary of 2015 activities is presented in the document, *2015 Greater Sage-grouse Habitat Assessment Report,* which was prepared by HDR and submitted to DOGM in March 2016.

Based on the 2015 assessment results and with input from DOGM and UDWR, HDR has developed this addendum to the work plan that identifies proposed 2016 field activities.

Proposed 2016 Assessment Activities

Task 1: Update Database

In 2015, HDR developed a database for managing local and regional sage-grouse conservation and mitigation plans, legislation, and habitat and population data. In 2016, HDR will update the database, based on a review of new developments in these parameters, and incorporate 2015 field activities and additional data needs identified during completion of the 2015 baseline report. In addition, HDR will coordinate with UDWR to ensure the database includes pertinent sage-grouse studies conducted by others in the area in 2015. General database maintenance and support will occur throughout 2016 as needed.

Task 2: Further Identify and Map Anthropogenic Features (west mine property)

During 2015, HDR reviewed available data and conducted field surveys to identify and map man-made features and disturbances on and near ecological sites within the east mine and Barton Ranch properties. In 2016, HDR will extend mapping to the west mine property (see work plan for maps). Mapping will be completed following work plan protocols and through a combination of collecting field data with the mobile app (including sub-meter GPS) and digitizing features through aerial imagery interpretation with field checks (in the same GIS database for the mobile app).

Task 3: Further Assess Ecological Site Potential to Characterize Seasonal Habitat Areas (west mine property)

The conservation and mitigation plan for the Vernal Mine would likely consider past and current mining and reclamation areas, relatively undisturbed areas that provide sage-grouse habitat and areas that are currently unsuitable but could become suitable. During 2015, HDR evaluated land potential on the east mine and Barton Ranch properties. In 2016, HDR will follow the same methodology used in 2015 to identify ecological sites on the west mine property that either currently provide or could potentially provide sage-grouse habitat in the future, and the current vegetation cover types of these sites (see work plan for maps).

Task 4: Collect Additional Habitat Data (east and west mine properties, and Barton Ranch)

In 2016, HDR will continue collecting vegetation data through stratified random sampling on both the east mine property and the Barton Ranch to help establish baseline habitat characteristics. Emphasis will be placed on conducting surveys during sage-grouse breeding and brood-rearing periods (April through June and July through August, respectively) since there were minimal vegetation surveys done during this time period in 2015. Methods will follow line-intercept and Daubenmire frame techniques (LIDF) as described in the work plan. HDR will complete an additional 20 to 30 transects in areas identified as potential breeding and brood-rearing habitat, and record any observed sage-grouse signs (pellets or feathers) within 5 meters of vegetation transects during data collection.

As part of Tasks 2 and 3, HDR will review available habitat and disturbance data for the west mine property to determine existing conditions and ecological site potential of seasonal habitat, reclaimed sites, and areas that are currently forested (juniper). Based on a review of available data and through a qualitative field assessment, HDR will conduct LIDF vegetation surveys at select sites on the west mine property. For reclamation and forested sites, HDR will collect representative sub-samples in order to help develop a general accounting of potential sage-grouse habitat for the entire mine. Mining activities could provide long-term benefits to sage-grouse in areas that are currently forested (juniper) and are reclaimed as sagebrush communities (or areas reclaimed as grasslands that eventually transition to sagebrush communities). Accordingly, the effects of past, current, and future mining activities would be incorporated into the conservation and mitigation plan for the mine.

During habitat sampling periods for breeding and brood-rearing habitat, HDR will also conduct vegetation sampling at GPS locations of UDWR monitored sage-grouse if individuals are documented in or near the east mine property or Barton Ranch (see Task 5 for sage-grouse monitoring). HDR will coordinate with UDWR for location data and appropriate protocols to minimize impacts to sage-grouse in the area.

Task 5: Conduct Sage-grouse Surveys and Monitoring (east and west mine properties, and Barton Ranch)

UDWR and others monitor sage-grouse populations in the Vernal area, including within the vicinity of the Vernal Mine. With support from the U.S. Forest Service and others, in 2016 UDWR plans to fasten GPS transmitters to sage-grouse at leks near the east mine property. Simplot has committed funding for two transmitters to be used in the mine area. HDR will coordinate with UDWR to offer assistance, under the supervision of UDWR, during the placement of these GPS transmitters and with monitoring to help document seasonal habitat use and movement patterns.

In 2016, HDR is no longer proposing to conduct late brood-rearing surveys with bird dogs, as was presented in the work plan.

Task 6: Analyze Data and Prepare 2016 Baseline Monitoring Report

As described in the work plan, HDR will compile and analyze habitat; use data to characterize vegetation structure and composition, relative sage-grouse use, and abundance (at sites where there is sufficient evidence of use); and evaluate potential influences of man-made features.

The annual report will summarize findings, draw comparisons, and evaluate habitat quality; data forms, and spreadsheets with raw data (output from app database); photos; and maps and GIS data (in app database and report figures).

Schedule and Deliverables

Once proposed 2016 activities have been reviewed, revised, and finalized, HDR will develop a detailed schedule and cost estimate. **Table 1** shows the proposed general schedule.

Table 1. Proposed General Schedule for 2016 Work Plan Activities

Task	Timeline
Task 1: Update Database (review 2015 results with agency feedback; coordinate status of state mitigation planning, and evaluate potentially applicable modeling; review lek count data; review data on west side property applicable to sage-grouse)	March/April 2016
Task 2: Further Identify and Map Anthropogenic Features (west mine property only)	March/April 2016
Task 3: Further Assess Ecological Site Potential to Characterize Seasonal Habitat Areas (west mine property only)	March/April 2016
Task 4: Collect Additional Habitat Data (LIDF vegetation transects on east mine property and Barton Ranch nesting and summer habitats; sub-sample habitat at sage-grouse locations; habitat mapping and limited vegetation transects on west mine property)	April-June and July-August 2016
Task 5: Conduct Sage-grouse Surveys and Monitoring (support UDWR GPS transmitter studies)	Periodically throughout 2016
Task 6: Analyze Data and Prepare 2016 Baseline Monitoring Report	Fall/winter 2016

The following deliverable is anticipated:

- Draft and final 2016 baseline monitoring report